



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,970	07/08/2004	Georg Weihrauch	20776.1	3379

7590 06/14/2006

Browdy and Neimark, P.L.L.C.
Suite 300
624 9th Street, N.W.
Washington, DC 20001

EXAMINER

HEITBRINK, JILL LYNNE

ART UNIT PAPER NUMBER

1732

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/500,970	WEIHRAUCH, GEORG	
	Examiner	Art Unit	
	Jill L. Heitbrink	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 75,79-106 and 109-151 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 75,79-106 and 109-151 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 75, 79-106 and 109-151 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 98-119 of copending Application No. 10/508,182. Although the conflicting claims are not identical, they are not patentably distinct from each other because the common ratio of the cross section of a bristle to the bristle length is less than 1:10 since bristle are long and narrow.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 75, 79-106, 109-112, 118-127, 135 and 147-151 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kutik Pat. No. 3,357,058 taken together with INJECTION MOLDING HANDBOOK, 3rd edition by Rosato et al.

5. Kutik discloses injection molding bristles. The ratio of the cross section to the length of the channels are clearly within the ratio of 1:10 as shown in the figures and as known for the size of molded bristles for brushes and toothbrushes. Kutik discloses venting of the channel length during molding (col. 1, lines 67-69) which is transverse to the flow direction of the polymer mass. Rosato teaches the injected material having a high core speed in the center flow (page 249) and a large shearing effect due to wall friction (pages 249,250) of the mass under distinct longitudinal orientation of the polymer molecules (page 244). The injected material having a high core speed in the center flow and a large shearing effect due to wall friction of the mass under distinct longitudinal orientation of the polymer molecules would have been obvious in Kutik as shown by Rosato in view of the elongated shape of the cavity. The injection pressure being set to support crystal seed formation would have been obvious from the longitudinal orientation of the polymer in the elongated cavity. The injection pressure need to fill the elongated cavity would have been within the claimed range in Kutik in view of the teaching of Rosato (page 670-672) so as to properly fill the cavity. Kutik discloses simultaneously injecting the bristles which may have different lengths and cross sections as shown by the drawings. The molding of bristles with different bending elasticity by molding different polymer masses in the same molding channels would have been obvious since each molding mass has different intrinsic properties.

Art Unit: 1732

6. Claims 75, 79-106 and 109-151 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klinkhammer Pat. No. 5,531,582 taken together with INJECTION MOLDING HANDBOOK, 3rd edition by Rosato et al.

7. Klinkhammer discloses injection molding bristles. The ratio of the cross section to the length of the channels are clearly within the ratio of 1:10 as shown in the figures and as known for the size of molded bristles for brushes and toothbrushes. Klinkhammer discloses venting of the channel length during molding (col. 2, lines 50-58) which is transverse to the flow direction of the polymer mass. Rosato teaches the injected material having a high core speed in the center flow (page 249) and a large shearing effect due to wall friction (pages 249,250) of the mass under distinct longitudinal orientation of the polymer molecules (page 244). The injected material having a high core speed in the center flow and a large shearing effect due to wall friction of the mass under distinct longitudinal orientation of the polymer molecules would have been obvious in Klinkhammer as shown by Rosato in view of the elongated shape of the cavity. The injection pressure being set to support crystal seed formation would have been obvious from the longitudinal orientation of the polymer in the elongated cavity. The injection pressure need to fill the elongated cavity would have been within the claimed range in Klinkhammer in view of the teaching of Rosato (page 670-672) so as to properly fill the cavity. Klinkhammer discloses simultaneously injecting the bristles which may have different lengths and cross sections as shown by the drawings. The molding of bristles with different bending elasticity by molding different polymer masses

in the same molding channels would have been obvious since each molding mass has different intrinsic properties.

Response to Arguments

8. Applicant's arguments filed March 22, 2006 have been fully considered but they are not persuasive.

9. Applicant argues that the prior art does not teach the injection pressure being 2000 bar. First, as to the apparatus claims 106, 109-151, a means for generating an injection pressure of at least 2000 bar is not new in the art of injection molding. If a structure to produce at least 2000 bar was unknown, then applicant's disclosure would be incomplete as to any new structure necessary to build an injection pressure of over 2000 bar. As stated in MPEP 2114:

APPARATUS CLAIMS MUST BE STRUCTUR-ALLY DISTINGUISHABLE FROM THE PRIOR ART >While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus

claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE APPARATUS CLAIM FROM THE PRIOR ART A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was “for mixing flowing developer material” and the body of the claim recited “means for mixing ..., said mixing means being stationary and completely submerged in the developer material”. The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).

10. Rosato et al. (page 670, top right column and page 672, bottom left column to top of right column) teaches the dynamic pressure loss from the injection unit (nozzle) to the end of the cavity as 125.8MPa or 1.258×10^5 kPa. This is just the amount lost. The actual injection would require pressure at the end and throughout the cavity for fill and for packing. Plus, additionally pressure would clearly be need for the specific cavity

Art Unit: 1732

shape of Kutik or Klinkhammer. An injection pressure of at least 2000 bar would have been obvious to fill the cavity of Kutik or Klinkhammer in view of the teaching of the pressure loss from the nozzle to the end of the cavity and the pressure in the injection means. Applicant argues that there is no motivation for the combining of the references. The examiner believe that a person of ordinary skill in the art would have analyzed the injection operation using known analysis such as Rosato to determine the effects and necessary operating condition to perform the process of Kutik or Klinkhammer (see col.6, lines 20-26).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1732

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh